DOCUMENT RESUME

ED 091 395 SP 008 074

AUTHOR McKnight, Philip C.
TITLE The Role of the Learner in Improving Instruction: Development of Technical Skills of Learning in Classroom Interaction.
PUB DATE Apr 74
NOTE 11p.; Paper presented at the Annual Meeting of the American Educational Research Association (Chicago, Illinois, April 20, 1974)

EDRS PRICE MF-$0.75 HC-$1.50 PLUS POSTAGE
DESCRIPTORS Classroom Communication; *Skill Development; *Skills; *Student Participation; *Student Teacher Relationship; *Teacher Participation

ABSTRACT

This paper examines the potential role of students in enhancing the value of student-teacher interaction by discussing two of the technical skills of teaching developed by the Stanford Center for Research and Development in Teaching. The two skills, set induction and probing questions, are described in relation to teaching behaviors and complementary learner skills. Set induction, a process by which a teacher makes clear the purpose and direction of a lesson, is used by teachers to motivate students. Learner activities in relation to set induction include developing set induction activities with the teacher and revising specific sets by diagnosing and evaluating their usefulness. The use of probing questions allows the teacher to encourage the student to give more than a simplistic answer in order to strengthen student understanding of various concepts. The use of probing questions by students enables them to carry out activities as intended by the teacher and is useful in decreasing communication problems in the classroom. The author concludes that the technical skills enable the learner to play a more active and important role in instruction. (A 10-item bibliography is included.) (PD)

ED 091395

THE ROLE OF THE LEARNER IN IMPROVING INSTRUCTION: DEVELOPMENT OF TECHNICAL SKILLS OF LEARNING IN CLASSROOM INTERACTION

Philip C. McKnight
School of Education
University of Kansas

U S DEPARTMENT OF HEALTH
EDUCATION & WELFARE
NATIONAL INSTITUTE OF
EDUCATION
THIS DOCUMENT HAS BEEN REPRODUCED EXACTLY AS RECEIVED FROM THE PERSON OR ORGANIZATION ORIGINATING IT. POINTS OF VIEW OR OPINIONS STATED DO NOT NECESSARILY REPRESENT OFFICIAL NATIONAL INSTITUTE OF EDUCATION POSITION OR POLICY

American Educational Research Association
Annual Convention
April 20, 1974

SP008 014

The role of the teacher in the classroom learning process has long received careful attention by individual and group deliberation and research. Researchers who differ substantially in their philosophy of education have shared a common focus on the teacher as the principal actor in classroom instructional interaction. Student participation has not been of primary concern of researchers, although their developmental, socioeconomic, etc., characteristics have been studied at length, often with useful results. The interaction process however, implies and requires a dyadic relationship, and classroom interaction means student involvement. It would seem that the instructional role of the student, because it complements the role of the teacher, would be a valuable area for study. Such study might result in the formulation of learner skills which could extend and enhance teaching skills.

The purpose of this paper then, is to examine the potential role of students in enhancing the value of student-teacher interaction and to discuss methods by which this might be accomplished. Underlying the discussion is the assumption that students' behaviors do, in part, determine the direction and nature of classroom interaction. By face value alone, student participation, as one of the two complementary roles which comprise classroom pedagogical interaction, is important. However, there is a better rationale for such an assumption, and because it is crucial to the success of the student skills discussed here, a brief review of this rationale may be useful. Assuming the teacher's role to be one of leadership, his dominant position (as well as his greater subject matter knowledge, experience, and age) could be seen as one rather impervious to student influence, thereby diminishing the importance of the student's role in classroom interaction. However, a substantial body of carefully designed and carried out research on the role of the student

in classroom interaction suggests that students do influence their teachers' behaviors. The theoretical basis for this research has been provided by consistency theory, which offers a useful means of describing the process by which teachers may alter their behaviors to conform more closely to expectations inherent in feedback from students.

Consistency theory is the name applied by Zajonc (1960) to several contributions to the explanation of opinion and attitude change. The efforts of Heider (1958) on "Balanced states," of Newcomb (1959) on "symmetry," of Osgood and Tannenbaum (1955) on "Congruity," and of Festinger (1957) on "Cognitive dissonance" have also been called "Equilibrium Theory." A review of consistency theory is beyond the scope of the present discussion. Excellent reviews and discussions of these theories are to be found in Brown (1965) and in Gage, Runkel, Chatterjee (1960). Basically, consistency theory may be described as individuals' drive for stability and meaning in their views of themselves and their environment, and in their interactions with others. The results of such concern will be adaptive changes of attitudes and behavior in order to attain and maintain equilibrium, as explained by Heider, Festinger, etc. Such changes may be positive, as in the case of "trying harder to get along with others" or they may be negative, as in the case of the stereotyping of others in order to establish means of dealing with them. Though such efforts may sometimes appear irrational, they may be understandable in terms of a person's past behavior and efforts to maintain symmetry. As Argyle (1969) says:

> . . . Persons are seen as highly integrated unities, with conscious experiences and intentions that make sense of their observed behavior. The achievement of such perceptions involves cognitive processes whereby the stimulus material is integrated, and a concept or schema of the other is constructed. As Bartlett

(1932) said, there is an "effort after the meaning" in perception (p. 155).

In a study of student perceptions and teacher behavior, Gage et al. (1960) hypothesized that "teachers, given information concerning how their pupils describe their actual and their ideal teacher's behavior, will change their behaviors toward those of the pupils' ideal teacher." The subsequent research supported the hypothesis. Students' descriptions of the actual versus ideal behavior of their teachers not only helped to change teachers' behaviors in the direction of the ratings of the "ideal" held by the students, but also made teachers more accurate in predicting their student's descriptions of the teacher.

Thus, it would appear that teachers are both aware of and responsive to student feedback. It seems logical also that teachers would be responsive to student initiated pedagogical behaviors. Based on this rationale, I would like to consider several potential means by which students might themselves enhance pedagogical classroom interaction. These means might be looked upon as complementary skills to those of teaching, and help to reinforce the idea that classroom interaction should be a dyadic process.

I would like to base the discussion on a set of teaching skills called the "Technical Skills of Teaching". Developed by the Stanford Center for Research and Development in Teaching, these skills define useful teaching behaviors in a way that beginning and experienced teachers can refine and adapt them to meet their specific teaching needs and goals. Such clarity and coherence results from an attempt to develop the skills systematically to embody various principles of learning theory developed in experimental and educational psychology. Such development makes it possible to hypothesize with some confidence about the relation between a teacher's use of skills and their effect on subsequent student learning.

Finally, the Technical Skills of Teaching are succinct; i.e. they relate to rather distinguishable classroom interaction activities, which makes it easier to describe and to investigate their role and value in classroom interaction. Gage classifies this as a "micro-criterion" approach to the identification of teaching effectiveness standards. It is beyond the scope of this discussion to review the Technical Skills of Teaching. Such a review may be found in articles by Berliner (1969) and by McKnight (1971).

For present purposes, I would like to describe two of the skills as they relate to teaching behaviors, and then discuss possible complementary learner skills to each.

Set Induction-Teacher Behavior

Set induction is a process by which a teacher makes clear the purpose and direction of a lesson to students to make it easier for them to follow and to become interested in the lesson. A basic goal of set induction is to motivate the students. Motivation is often difficult in lessons, particularly in lectures, because it is difficult for teachers to point out the relationship between present performance and future rewards.

The term "set" refers to the establishment of a cognitive relationship or rapport between pupils and teacher in order to obtain immediate involvement in a lesson. There are other names for it, such as, "advanced organizers," a term used by Ausbel. Set might also be seen as a kind of fram of reference for an entire lesson or unit. Thus, it is more than an introduction. Set may occur at various points in a lesson and deals not only with what is to come in the present lesson, but what has come before. Set ties present learning to prior and future learning activities in order for the student to see w e the present work fits into the overall plan and purpose of a course. It is improtant that the student see that each lesson

is a part of the larger context and that it does not stand alone.

In sum, the teacher using set induction techniques is interested in students seeing the nature, intent, and context of the activities that are to follow in hopes that they will become more understandable to students, and also that the activities will be intrinsically interesting to them.

Set Induction - Possible Student Skills

For one, students could participate in the revision of specific "sets" by helping teachers to diagnose and evaluate their usefulness. Revisions (elaboration, deletions, etc.) would be helpful to the students at that point and to students in subsequent classes. Such revision would involve students asking themselves such questions as, "Do I really know what he means?" or "Do I see the connection with yesterdays discussion?" Obtaining answers to these questions would really involve questionning skills on the part of the student. Specifically, they should be able to ask teachers for clarification, elaboration, justification, etc., of their introductions.

Students could also be trained to help develop set induction activities with the teacher, thereby participating in the process from the beginning. This should make their subsequent feedback activities more pedagogically interesting and valuable. The value here would be twofold: One, the set inductions developed would be better, and two, the student attitude toward the lessons should be improved because of their involvement in their preparation.

Probing Questions - Teacher behaviors

Probing questions require students to go beyond initial answers in ways that will help them strengthen their understanding of the concepts being discussed. Probing questions help students become more involved

with the subject matter because they encourage, or perhaps the word is force, students to go beyond cursory answers. Initial answers to teacher or student questions are often of a cursory, shallow nature largely because students have seldom been required to go beyond such answers. Teachers are often satisfied with having any answer given because it fills the gap left after the teacher's questions. This is uncomfortable for both teachers and students, but particularly for teachers. Thus teachers often let students get away with cursory answers and students come to see that this is the only answer that is really required.

A probing question, then, gets students to go beyond the initial, simplistic answers in ways which will enable them to strengthen their understanding of various concepts.

It is important to note that probing questions do not necessarily require a definitive answer. Thus, when a teacher requests students to justify, to clarify, to elaborate upon, to expand etc., their initial answers, he is hoping that the student will, by interacting with the subject matter, become better acquainted with it and understand it more fully, but he does not necessarily expect the student to arrive at a definitive explanation or rationale to the initial point. After all, the probing question is only part of the educational process and is not the only way for students to achieve an adequate understanding and comprehension. In this sense, then, probing questions may be considered to be open-ended or non-directive; that is, the questions should solicit opinions and personal experience, and encourage intuition and imagination as well as careful reasoning. Further, the teacher must convey to the student the idea that regardless of differences of opinion, his answers will be acceptable. While requiring the students to justify etc., his answers and opinions, the teacher makes it clear that what he wants from the student is a better

explanation, but not necessarily a perfect explanation. The teacher is not trying to put the student on the spot, or to make him change his answer through the use of probing questions. He is only trying to get the student to make his assumptions, opinions, etc., clearer to the class and clearer to himself. Students' explanations for concepts, phenomena, etc., especially where there is no right or final answer must be acceptable.

Probing Questions - Student behaviors

Perhaps the most useful skill here for students involves an understanding of the nature and intent of probing questions so that they can carry out tne activity as intended by the teacher. For example, when a teacher asked a student to justify his answer to a question, the student would understand that his response would be one of giving the supporting rationale for his statement. This might include underlying assumptions, specific facts and factors felt to be important, comparisons with other similar positions or conclusions, etc. Student sensitivity to the importance of probing questions for their academic achievement and personal satisfaction should be increased by familiarity with the cognitive activities elicited by such questions.

Students might also learn to use the questions with their peers and with their teachers. With regard to peers, probing questions might be quite valuable for both the questioner and those questioned. Use of more relevant and/or familiar terminology and concepts should help, but even more useful would be the increased focus on pedagogical topics brought about from having peers interested in them as well as teachers.

Students' use of such questions should also benefit teachers. Communication problems in classroom interaction are often caused by teachers whose introduction, explanations, instructions, etc., are vague, misleading, or simply given too rapidly. In such instances, it should be

appropriate and useful for students to ask such questions as "Would you please clarify that?" or "What do you mean by the term 'symbiotic relationship'?"

These then, are illustrations of the kind of learner skills which might be useful in classroom interacions. I think that such skills would offer two distinct advantages to the instructional process.

First, focussing on learner skills which complement the Technical Skills of Teaching might allow a student to acquire a repertoire of skills one by one. He would thereby learn the behaviors involved in a particular skill and also learn the context in which it is most usefully applied. This is not to suggest, however, that the skills would be seen in isolation; i.e. that they were not to be used concurrently with others.

Secondly, they might help the learner, and the teacher, develop a diagnostic approach to classroom instruction. In the long run, this would be the most helpful outcome. If both teachers and students were more aware of the nature and importance each other's roles in the acquisition of information, the transmission of culture, etc., they should have a greater appreciation and understanding of the learning process. This should stem in part from an increased focus on, or set towards, the lesson goals and subject matter. One pervasive problem, particularly in secondary schools, has been the lack of clear articulation between present classroom activities and requirements and the future rewards of such work. It is possible that students who have a more responsible part in, and understanding of, classroom pedagogical interaction will be able to make that articulation clearer, to the benefit of all concerned. Through involvement comes understanding and commitment.

Given such a possible outcome of learner skills similar to those described above, the question arises as to how to impart such skills to students. I would recommend that teachers and students learn the basic

skills together, so that each would know the how and why of their complementary skills. There are means presently available for efficient training in the Technical Skills of Teaching (produced by the General Learning Corporation), and comparable learning skills packages can be produced by teachers and/or commercially. In practice teachers could review their skills each year when students were learning their skills for the first time. As part of each training, it might be useful to train students in the use of a basic classroom interaction analysis instrument. The clearest advantage of such training would be seen in students' ability to provide comprehensive, reliable information to teachers. Students are a very obvious yet relatively untapped source of useful information on teaching performance. The previously discussed work by Gage, et al. (1960) indicates the responsiveness of teachers to informal student feedback. They should also be receptive to more formal feedback. The most important outcome, however, might be an enhanced learner disposition towards classroom processes and goals. As discussed previously, increased involvement enhances understanding and commitment. Student ability to help diagnose classroom interaction by using interaction analysis seems to embody this principle.

In conclusion, the learner may be able to play a much more signigicant part in his education than he is now doing. By means such as those discussed here, I think that we can help the learner, and the teacher, to enhance his pedagogical opportunity in classroom interactions. In the Technical Skills there is a viable, efficient vehicle to begin such an effort. Set induction and probing questions might be two initial skills on which to focus. In the end, however, it may not be so much what the skills are called which matters, but the fact that the learner is given a more active and important role in instruction. In that way, interaction will more closely be described <u>as</u> interaction.

References

Argyle, M. Social Interaction. London: Methuen & Co., Ltd., 1969.

Berliner, D. C. Microteaching and the technical skills approach to teacher training. Technical Report, No. 8. Stanford University, Contract No. OE-6-10-078. Stanford Center for Research and Development in Teaching, October, 1969.

Brown, R. Social Psychology. Toronto, Canada: Collier-MacMillan Canada, Ltd., 1965.

Festinger, L. A Theory of Cognitive Dissonance. Stanford, Calif: Stanford University Press, 1957.

Gage, N. L., Runkel, P. J., and Chatterjee, B. B. Equilibrium theory and behavior change: an experiment in feedback from pupils to teachers. Report No. 6. University of Illinois, Bureau of Educational Research, August, 1960.

Heider, F. The Psychology of Interpersonal Relations. New York: Wiley, 1958. Cited by Gage et al.

McKnight, P. C. Microteaching in Teacher Training: A Review of Research. Research in Education, No. 6, 1971.

Newcomb, T. M. Individual Systems of Orientation. In S. Koch (ed.), Psychology: A Study of a Science, 3. New York: McGraw-Hill, 1959. Cited by Gage et al.

Osgood, C. E. and Tannenbaum, P. H. The principle of congruity in the prediction of attitude change. Psychological Review, 1955, 62, 42-45. Cited by Gage et al.

Zajonc, R. B. The concepts of balance, congruity, and dissonance. Public Opinion Quarterly, 1960, 24, 280-296. Cited by Gage et al.